UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

POLLUTION REPORT

Date: June 13, 1989

Region II
Removal Action Branch
Edison, New Jersey

201-548-8730 - Commercial & FTS
24-Hour Emergency

TO: Database Manager
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POLREP:	Eight (8)
INCIDENT NAME/SITE NO:	Chemical Control Site/ 55
POLLUTANT:	Unknown compressed gas cylinders
CLASSIFICATION:	Major
SOURCE:	Defunct Hazardous Waste Treatment Facility
LOCATION:	23 South Front St., Elizabeth, N.J.
AMOUNT:	188 Compressed gas cylinders
WATER BODY:	Elizabeth & Arthur Kill Rivers

1. SITUATION:

A. The Chemical Control Corporation property is located on a peninsula formed by the Elizabeth and Arthur Kill Rivers. In April 1980, a major fire engulfed the former Hazardous Waste Treatment Facility which led to the site's inclusion on the NPL in December, 1982. In 1984, the Response and Prevention Branch (RPB) was tasked to secure the 188 compressed gas cylinders at the site. All but 6 of the 188 cylinders were overpacked in specially designed carbon steel containers and staged on site for future disposal. The current Removal Action is employing a technology developed specifically to treat unknown cylinders on site. The site closure remedial action is proceeding separately from the gas cylinder removal.

2. ACTION TAKEN:

A. Operation of the Cylinder Recovery Vessel (CRV) and Vapor Containment Area (VCA) by Earth Resources Corporation (ERC) is continuing. The following is a synopsis of those overpacks and cylinders processed by ERC during the period from June 1, 1989 to June 8, 1989.

1. Overpack 721: Contained air only, no treatment.
   Cylinder 721c: Contained hydrogen, CRV vented via flare.

2. Overpack 741: Contained hydrogen, vented via flare.
   Cylinder 741c: Contained air only, CRV processed.

3. Overpack 798: Contained hydrogen, vented via flare.
   Cylinder 798c: Contained air only, CRV processed.

4. Overpack 780: Contained air only, no treatment.
   Cylinder 780c: Contained Sulfur Dioxide, processed via scrubber.

5. Overpack 756: Contained hydrogen, air and propane, flared.
   Cylinder 756c: Contained air with a solid residue, CRV processed.

6. Overpack 759: Contained hydrogen and air, vented via flare.
   Cylinder 759c: Contained air only, CRV processed.

7. Overpack 767: Contained hydrogen and air, vented via flare.
   Cylinder 767c: Contained air only, CRV processed.

8. Overpack 757: Contained hydrogen and air, vented via flare.
   Cylinder 757c: Contained air only, CRV processed.

9. Overpack 745: Contained hydrogen and air, vented via flare.
   Cylinder 745c: Contained air only, CRV processed.

10. Overpack 744: Contained hydrogen and air, vented via flare.
    Cylinder 744c: Contained air only, CRV processed.

11. Overpack 763: Contained hydrogen and methane, vented via flare.
    Cylinder 763c: Contained air only, CRV processed.

12 Overpack 762: Contained hydrogen and air, vented via flare.
   Cylinder 762c: Contained air only, CRV processed.

13. Overpack 835: Contained air only, no treatment.
    Cylinder 835c: Contained air and water, CRV processed.

14. Overpack 802: Contained air only, no treatment.
    Cylinder 802c: Contained air only, CRV processed.

15. Overpack 789: Contained air only, no treatment.
    Cylinder 789c: Contained air only, CRV processed.

16. Overpack 765: Contained hydrogen and air, vented via flare.
    Cylinder 765c: Contained air only, CRV processed.

17. Overpack 754: Contained hydrogen and air, vented via flare.
    Cylinder 754c: Contained air only, CRV processed.

18. Overpack 700: Contained hydrogen and air, vented via flare.
Cylinder 700c: Contained air only, CRV processed.

19. Overpack 694: Contained hydrogen and air, vented via flare.
Cylinder 694c: Contained air only, CRV processed.

20. Overpack 806: Contained air only, no treatment.
Cylinder 806c: Perforated cylinder, no treatment.

21. Overpack 705: Contained hydrogen and air, vented via flare.
Cylinder 705c: Perforated cylinder, no treatment.

22. Overpack 730: Contained air only, no treatment.
Cylinder 730c: Contained air and water, CRV processed.

23. Overpack 808: Contained hydrogen and air, vented via flare.
Cylinder 808c: Contained air only, CRV processed.

24. Overpack 712: Contained air only, no treatment.
Cylinder 712c: Contained air only, CRV processed.

25. Overpack 809: Contained air only, no treatment.
Cylinder 809c: Contained air only, CRV processed.

26. Overpack 727: Contained air only, no treatment.
Cylinder 727c: Contained air only, CRV processed.

27. Overpack 692: Contained hydrogen, vented via flare.
Cylinder 692c: Contained air only, CRV processed.

28. Overpack 733: Contained hydrogen, vented via flare.
Cylinder 733c: Contained air only, CRV processed.

29. Overpack 736: Contained hydrogen and air, vented via flare.
Cylinder 736c: Contained air only, CRV processed.

30. Overpack 811: Contained hydrogen and air, vented via flare.
Cylinder 811c: Contained air only, CRV processed.

31. Overpack 716: Contained hydrogen and air, vented via flare.
Cylinder 716c: Contained air only, CRV processed.

32. Overpack 732: Contained hydrogen and air, vented via flare.
Cylinder 732c: Contained air only, CRV processed.

33. Overpack 702: Contained hydrogen and air, vented via flare.
Cylinder 702c: Contained air only, CRV processed.

34. Overpack 801: Contained hydrogen and air, vented via flare.
Cylinder 801c: CRV processed contained air only.

35. Overpack 758: Contained Methane, vented via flare.
Cylinder 758c: Contained air only, CRV processed.

36. Overpack 691: Contained hydrogen and air, vented via flare.
Cylinder 691c: Contained air only, CRV processed.

37. Overpack 766: Contained hydrogen and air, vented via flare.
Cylinder 766c: Contained air only, CRV processed.

38. Overpack 791: Contained air only, no treatment.
Cylinder 791c: Contained air only, CRV processed.

39. Overpack 784: Contained hydrogen and air, vented via flare.
Cylinder 784c: Contained air only, CRV processed.

40. Overpack 790: Contained hydrogen and air, vented via flare.
Cylinder 790c: Contained air only, CRV processed.

41. Overpack 722: Contained air only, no treatment.
Cylinder 722c: Contained air only, CRV processed.

42. Overpack 699: Contained air only, no treatment.
Cylinder 699c: Contained air only, CRV processed.

43. Overpack 783: Contained hydrogen, vented via flare.
Cylinder 783c: Contained air only, CRV processed.

44. Overpack 788: Contained hydrogen, vented via flare.
Cylinder 788c: Contained Hydrogen Chloride and Argon, processed via caustic scrubber.

45. Overpack 837: Contained hydrogen, vented via flare.
Cylinder 837c: Perforated cylinder, no treatment.

46. Overpack 787: Contained hydrogen and air, vented via flare.
Cylinder 787c: Contained air only, CRV processed.

47. Overpack 812: Contained hydrogen and air, vented via flare.
* Cylinder 812c: Contained air and alkyl aluminum halide, processed via caustic scrubber.

48. Overpack 693: Contained hydrogen and isobutane; flared.
\# Cylinder 693c: Contained air and an unknown crystal like substance, CRV processed.

49. Overpack 697: Contained hydrogen and air, vented via flare.
Cylinder 697c: Contained air only, CRV processed.

50. Overpack 815: Contained hydrogen and air, vented via flare.
Cylinder 815c: Contained air only, CRV processed.

51. Overpack 709: Contained hydrogen and air, vented via flare.
Cylinder 709c: Contained air only, CRV processed.

52. Overpack 818: Contained hydrogen and air, vented via flare.
Cylinder 818c: Contained hydrogen and possibly borane, Processed via caustic scrubber.

B. To date, a total of one hundred and thirty cylinders and one hundred and twenty-four overpacks have been processed. Of the 124 overpacks processed so far, 95 have contained hydrogen and/ or other contaminants which required treatment. The disposition of the 130 cylinders were as follows: 15 were visibly perforated, 96 were sampled in the CRV and were able to be vented through the flare. Eighteen cylinders required treatment through either the molecular sieve, the caustic scrubber, the flare or the activated carbon unit. One cylinder was valve sampled and contained only air.

C. The site's safety plan was amended to cover protocol to be used during flaring operations involving the disposal of the waste gases.

D. * Cylinder #812c was analyzed as containing air, but a fuming reaction occurred during the drilling of the cylinder to indicate the presence of another substance which was undetectable on the MS/IR. The undetectable substance was suspected to be an alkyl aluminum halide; as a result the material was processed via the caustic scrubber.

E. # Cylinder 693c was analyzed as containing air, upon removing the cylinder from the CRV and inspecting it, it was observed to contain a crystal like substance. The cylinder and its contents were placed back into the overpack, marked and staged for disposal as a solid hazardous waste.

F. To assure the on-site laboratory procedures are being executed properly, the OSC requested EPA QA/QC personnel performed an on-site inspection. Recommendations made as a result of the inspection were incorporated into the laboratory's protocol.

3. FUTURE PLANS AND RECOMMENDATIONS

A. Cylinder processing will continue as scheduled.

B. EPA will continue to take split samples from the overpacks and cylinders. These will be sent to an outside laboratory for conformation of the on-site analysis.

4. FINANCIAL STATUS:

A.	Total Project Ceiling Authorized	$ 1,888,000
B.	Total Funds Authorized for Mitigation Contracts	$ 1,670,000
C.	Expenditures for Mitigation Contracts	
1.a.	Amount obligated under DCNs # 0027 & 3013	$ 1,670,000

1.b.	Estimated expenditures as of 6/08/89	$ 1,033,143
1.c.	Balance remaining	$ 536,857
D.	Contingency Funds Available	$ 47,200
E.	Other Extramural Costs	
	TAT Salary/Travel as of 6/08/89 (TAT Ceiling as of 6/08/89, $66,000)	$ 40,301
F.	Intramural Removal Costs	
	EPA Salary/Travel as of 6/08/89 (EPA Ceiling as of 6/08/89, $104,400)	$ 29,483
G.	Total Expenditures	$ 1,102,927
	Percent of $2 Million	55.2%
	Percent of Total Project Ceiling	66%

FINAL POLREP_____ FURTHER POLREPS FORTHCOMING ✓ SUBMITTED BY Mark P. Pane

MARK P. PANE, OSC
REMOVAL ACTION BRANCH

DATE RELEASED JUNE 15, 1989